



## SEQUENCE LISTING

<110> Boylan, John  
Bowers, Alex

<120> Novel Serine Threonine Kinase Member, h2520-59

<130> 01017/36524A

<140> US/09/909,474

<141> 2001-07-19

<150> US 60/219,204

<151> 2000-07-19

<160> 15

<170> PatentIn version 3.0

<210> 1

<211> 2059

<212> DNA

<213> Homo sapiens

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<221> CDS

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acc cct ctg gct gct cct gcg ggt tcc ctg tcc agg aag aag cgg ttg 105  
Thr Pro Leu Ala Ala Pro Ala Gly Ser Leu Ser Arg Lys Lys Arg Leu  
5 10 15

gag ttg gat gac aac tta gat acc gag cgt ccc gtc cag aaa cga gct 153  
Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln Lys Arg Ala  
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cga agt ggg ccc cag ccc aga ctg ccc ccc tgc ctg ttg ccc ctg agc 201  
Arg Ser Gly Pro Gln Pro Arg Leu Pro Pro Cys Leu Leu Pro Leu Ser  
40 45 50

cca cct act gct cca gat cgt gca act gct gtg gcc act gcc tcc cgt 249  
Pro Pro Thr Ala Pro Asp Arg Ala Thr Ala Val Ala Thr Ala Ser Arg  
55 60 65

ctt ggg ccc tat gtc ctc ctg gag ccc gag gag ggc ggg cgg gcc tac 297  
Leu Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly Arg Ala Tyr  
70 75 80

cgg gcc ctg cac tgc cct aca ggc act gag tat acc tgc aag gtg tac 345  
Arg Ala Leu His Cys Pro Thr Gly Thr Glu Tyr Thr Cys Lys Val Tyr  
85 90 95

ccc gtc cag gaa gcc ctg gcc gtg ctg gag ccc tac gcg cgg ctg ccc 393  
Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala Arg Leu Pro  
100 105 110 115

ccg cac aag cat gtg gct cgg ccc act gag gtc ctg gct ggt acc cag Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala Gly Thr Gln 120 125 130	441
ctc ctc tac gcc ttt ttc act cgg acc cat ggg gac atg cac agc ctg Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met His Ser Leu 135 140 145	489
gtg cga agc cgc cac cgt atc cct gag cct gag gct gcc gtg ctc ttc Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala Val Leu Phe 150 155 160	537
cgc cag atg gcc acc gcc ctg gcg cac tgt cac cag cac ggt ctg gtc Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His Gly Leu Val 165 170 175	585
ctg cgt gat ctc aag ctg tgt cgc ttt gtc ttc gct gac cgt gag agg Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp Arg Glu Arg 180 185 190 195	633
aag aag ctg gtg ctg gag aac ctg gag gac tcc tgc gtg ctg act ggg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val Leu Thr Gly 200 205 210	681
cca gat gat tcc ctg tgg gac aag cac gcg tgc cca gcc tac gtg gga Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala Tyr Val Gly 215 220 225	729
cct gag ata ctc agc tca cgg gcc tca tac tcg ggc aag gca gcc gat Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys Ala Ala Asp 230 235 240	777
gtc tgg agc ctg ggc gtg gcg ctc ttc acc atg ctg gcc ggc cac tac Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala Gly His Tyr 245 250 255	825
ccc ttc cag gac tcg gag cct gtc ctg ctc ttc ggc aag atc cgc cgc Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys Ile Arg Arg 260 265 270 275	873
ggg gcc tac gcc ttg cct gca ggc ctc tcg gcc cct gcc cgc tgt ctg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala Arg Cys Leu 280 285 290	921
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ggc atc ctc ctg cac ccc tgg ctg cga cag gac ccg atg ccc tta gcc Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met Pro Leu Ala 310 315 320	1017
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ctg ggg ctg gac gaa gcc agg gaa gag gag gga gac aga gaa gtg gtt Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg Glu Val Val 340 345 350 355	1113
ctg tat ggc taggaccacc ctactacacg ctacagctgcc aacagtggat Leu Tyr Gly	1162



Lys Val Tyr Pro Val Gln Glu Ala Leu Ala Val Leu Glu Pro Tyr Ala  
 100 105 110

Arg Leu Pro Pro His Lys His Val Ala Arg Pro Thr Glu Val Leu Ala  
 115 120 125

Gly Thr Gln Leu Leu Tyr Ala Phe Phe Thr Arg Thr His Gly Asp Met  
 130 135 140

His Ser Leu Val Arg Ser Arg His Arg Ile Pro Glu Pro Glu Ala Ala  
 145 150 155 160

Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys His Gln His  
 165 170 175

Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val Phe Ala Asp  
 180 185 190

Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp Ser Cys Val  
 195 200 205

Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala Cys Pro Ala  
 210 215 220

Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr Ser Gly Lys  
 225 230 235 240

Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr Met Leu Ala  
 245 250 255

Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu Phe Gly Lys  
 260 265 270

Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala  
 275 280 285

Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu  
 290 295 300

Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met  
 305 310 315 320

Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val  
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Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg  
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Glu Val Val Leu Tyr Gly  
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Lys	Arg	Ala	Arg	Ser	Gly	Pro	Gln	Pro	Arg	Leu	Pro	Pro	Cys	Leu	Leu	35	40	45	
Pro	Leu	Ser	Pro	Pro	Thr	Ala	Pro	Asp	Arg	Ala	Thr	Ala	Val	Ala	Thr	50	55	60	
Ala	Ser	Arg	Leu	Gly	Pro	Tyr	Val	Leu	Leu	Glu	Pro	Glu	Glu	Gly	Gly	65	70	75	80
Arg	Ala	Tyr	Gln	Ala	Leu	His	Cys	Pro	Thr	Gly	Thr	Glu	Tyr	Thr	Cys	85	90	95	
Lys	Val	Tyr	Pro	Val	Gln	Glu	Ala	Pro	Ala	Val	Leu	Glu	Pro	Tyr	Ala	100	105	110	
Arg	Leu	Pro	Pro	His	Lys	His	Val	Ala	Arg	Pro	Thr	Glu	Val	Leu	Ala	115	120	125	
Gly	Thr	Gln	Leu	Leu	Tyr	Ala	Phe	Phe	Thr	Arg	Thr	His	Gly	Asp	Met	130	135	140	
His	Ser	Leu	Val	Arg	Ser	Arg	His	Arg	Ile	Pro	Glu	Pro	Glu	Ala	Ala	145	150	155	160
Val	Leu	Phe	Arg	Gln	Met	Ala	Thr	Ala	Leu	Ala	His	Cys	His	Gln	His	165	170	175	
Gly	Leu	Val	Leu	Arg	Asp	Leu	Lys	Leu	Cys	Arg	Phe	Val	Phe	Ala	Asp	180	185	190	
Arg	Glu	Arg	Lys	Lys	Leu	Val	Leu	Glu	Asn	Leu	Glu	Asp	Ser	Cys	Val	195	200	205	
Leu	Thr	Gly	Pro	Asp	Asp	Ser	Leu	Trp	Asp	Lys	His	Ala	Cys	Pro	Ala	210	215	220	
Tyr	Val	Gly	Pro	Glu	Ile	Leu	Ser	Ser	Arg	Ala	Ser	Tyr	Ser	Gly	Lys	225	230	235	240
Ala	Ala	Asp	Val	Trp	Ser	Leu	Gly	Val	Ala	Leu	Phe	Thr	Met	Leu	Ala	245	250	255	
Gly	His	Tyr	Pro	Phe	Gln	Asp	Ser	Glu	Pro	Val	Leu	Leu	Phe	Gly	Lys	260	265	270	
Ile	Arg	Arg	Gly	Ala	Tyr	Ala	Leu	Pro	Ala	Gly	Leu	Ser	Ala	Pro	Ala	275	280	285	
Arg	Cys	Leu	Val	Arg	Cys	Leu	Leu	Arg	Arg	Glu	Pro	Ala	Glu	Arg	Leu	290	295	300	

Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln Asp Pro Met  
305 310 315 320

Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala Gln Val Val  
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Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu Gly Asp Arg  
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Glu Val Val Leu Tyr Gly  
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35 40 45

Ala Gly Pro Pro Ala Gly Ala Leu Glu Ala Leu Ser Pro Gly Gly Ala  
50 55 60

Arg Ala His Ala Glu Arg Arg Gly Glu Met Arg Ala Thr Pro Leu Ala  
65 70 75 80

Ala Pro Ala Gly Ser Leu Ser Arg Lys Lys Arg Leu Glu Leu Asp Asp  
                             85                            90                            95  
 Asn Leu Asp Thr Glu Arg Pro Val Gln Lys Arg Ala Arg Ser Gly Pro  
                             100                            105                            110  
 Gln Pro Arg Leu Pro Pro Cys Leu Leu Pro Leu Ser Pro Pro Thr Ala  
                             115                            120                            125  
 Pro Asp Arg Ala Thr Ala Val Xaa Thr Xaa Ser Arg Xaa Xaa Xaa Tyr  
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 Val Leu Leu Glu Ala Arg Arg Xaa Ala  
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 Trp Gly His Ala Gln Pro Gly Ala Lys Arg His Arg Ile Pro Glu Pro  
                             20                            25                            30  
 Glu Ala Ala Val Leu Phe Arg Gln Met Ala Thr Ala Leu Ala His Cys  
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 His Gln His Gly Leu Val Leu Arg Asp Leu Lys Leu Cys Arg Phe Val  
                             50                            55                            60  
 Phe Ala Asp Arg Glu Arg Lys Lys Leu Val Leu Glu Asn Leu Glu Asp  
   65                            70                            75                            80  
 Ser Cys Val Leu Thr Gly Pro Asp Asp Ser Leu Trp Asp Lys His Ala  
                             85                            90                            95  
 Cys Pro Ala Tyr Val Gly Pro Glu Ile Leu Ser Ser Arg Ala Ser Tyr  
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 Ser Gly Lys Ala Ala Asp Val Trp Ser Leu Gly Val Ala Leu Phe Thr  
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 Met Leu Ala Gly His Tyr Pro Phe Gln Asp Ser Glu Pro Val Leu Leu  
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 Phe Gly Lys Ile Arg Arg Gly Ala Tyr Ala Leu Pro Ala Gly Leu Ser  
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 Ala Pro Ala Arg Cys Leu Val Arg Cys Leu Leu Arg Arg Glu Pro Ala  
                             165                            170                            175  
 Glu Arg Leu Thr Ala Thr Gly Ile Leu Leu His Pro Trp Leu Arg Gln  
                             180                            185                            190  
 Asp Pro Met Pro Leu Ala Pro Thr Arg Ser His Leu Trp Glu Ala Ala  
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 Gln Val Val Pro Asp Gly Leu Gly Leu Asp Glu Ala Arg Glu Glu Glu  
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Gly Asp Arg Glu Val Val Leu Tyr Gly  
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			20					25					30		
Ala	Arg	Ala	His	Ala	Glu	Arg	Arg	Gly	Glu	Met	Arg	Ala	Thr	Pro	Leu
		35					40					45			
Ala	Ala	Pro	Ala	Gly	Ser	Leu	Ser	Arg	Lys	Lys	Arg	Leu	Glu	Leu	Asp
	50					55					60				
Asp	Asn	Leu	Asp	Thr	Glu	Arg	Pro	Val	Gln	Lys	Arg	Ala	Arg	Ser	Gly
65				70					75					80	
Pro	Gln	Pro	Arg	Leu	Pro	Pro	Cys	Leu	Leu	Pro	Leu	Ser	Pro	Pro	Thr
				85					90					95	
Ala	Pro	Asp	Arg	Ala	Thr	Ala	Val	Ala	Thr	Ala	Ser	Arg	Leu	Gly	Pro
			100					105					110		
Tyr	Val	Leu	Leu	Glu	Pro	Glu	Glu	Gly	Gly	Arg	Ala	Tyr	Gln	Ala	Leu
	115						120					125			
His	Cys	Pro	Thr	Gly	Thr	Glu	Tyr	Thr	Cys	Lys	Val	Tyr	Pro	Val	Gln
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Glu	Ala	Leu	Ala	Val	Leu	Glu	Pro	Tyr	Ala	Arg	Leu	Pro	Pro	His	Lys
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His	Val	Ala	Arg	Pro	Thr	Glu	Val	Leu	Ala	Gly	Thr	Gln	Leu	Leu	Tyr
				165					170					175	
Ala	Phe	Phe	Thr	Arg	Thr	His	Gly	Asp	Met	His	Ser	Leu	Val	Arg	Ser
			180					185					190		
Arg	His	Arg	Ile	Pro	Glu	Pro	Glu	Ala	Ala	Val	Leu	Phe	Arg	Gln	Met
		195					200					205			
Ala	Thr	Ala	Leu	Ala	His	Cys	His	Gln	His	Gly	Leu	Val	Leu	Arg	Asp
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Leu	Lys	Leu	Cys	Arg	Phe	Val	Phe	Ala	Asp	Arg	Glu	Arg	Lys	Lys	Leu
225				230						235					240
Val	Leu	Glu	Asn	Leu	Glu	Asp	Ser	Cys	Val	Leu	Thr	Gly	Pro	Asp	Asp
				245					250					255	
Ser	Leu	Trp	Asp	Lys	His	Ala	Cys	Pro	Ala	Tyr	Val	Gly	Pro	Glu	Ile
			260					265					270		
Leu	Ser	Ser	Arg	Ala	Ser	Tyr	Ser	Gly	Lys	Ala	Ala	Asp	Val	Trp	Ser
		275					280					285			

Leu Gly Val Ala Leu Phe Thr Met Leu Ala Gly His Tyr Pro Phe Gln  
290 295 300

Asp Ser Glu Pro Val Leu Leu Phe Gly Lys Ile Arg Arg Gly Ala Tyr  
305 310 315 320

Ala Leu Pro Ala Gly Leu Ser Ala Pro Ala Arg Cys Leu Val Arg Cys  
325 330 335

Leu Leu Arg Arg Glu Pro Ala Glu Arg Leu Thr Ala Thr Gly Ile Leu  
340 345 350

Leu His Pro Trp Leu Arg Gln Asp  
355 360

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gacctgagat actcagctca cgggcctcat actcgggcaa ggcagccgat gtctggagcc 180  
tgggcgtggc gctcttcacc atgctggccg gccactaccc cttccaggac tcggagcctg 240  
tctgctctt cggcaagatc cgccgcgggg cctacgcctt gcctgcaggc ctctcgccc 300  
ctgccgctg tctggttcgc tgccctcttc gtccgggagcc agctgaacgg ctcacagcca 360  
caggcatcct cctgcacccc tggctgcgac aggacccgat gcccttagcc ccaaccgat 420  
cccatctctg ggaggctgcc caggtggtcc ctgatggact ggggctggac gaagccaggg 480  
aagaggaggg agacagagaa gtggttctgt 510

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Glu Leu Asp Asp Asn Leu Asp Thr Glu Arg Pro Val Gln Lys Arg Ala  
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Arg Ser Gly Pro Gln Pro Arg Leu Cys  
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Gly Pro Tyr Val Leu Leu Glu Pro Glu Glu Gly Gly Arg Ala Tyr Gln  
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Ala Leu His Cys Pro Thr Gly Thr Glu  
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Arg Ser His Leu Trp Glu Ala Ala Gln Val Val Pro Asp Gly Leu Gly  
1 5 10 15

Leu Asp Glu Ala Arg Glu Glu Glu Cys  
20 25